1

2

3

4

5

6

FILED

AUG 2 2 1997

RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT,
NORTHERN DISTRICT OF CALIFORNIA

296

7   UNITED STATES DISTRICT COURT

8   FOR THE NORTHERN DISTRICT OF CALIFORNIA

9

10 ROGER SCHLAFLY,	)	CIVIL NO. 94-20512 SW
11 Plaintiff,	))	ORDER DENYING PLAINTIFF'S MOTION FOR PARTIAL SUMMARY
12 v.	))	JUDGMENT; GRANTING RSA'S MOTION FOR SUMMARY ADJUDICATION ON
13 PUBLIC KEY PARTNERS and RSA DATA SECURITY INC.,	)))	THE VALIDITY OF THE RSA PATENT; AND DISMISSING
14 Defendants.	)))	PLAINTIFF'S CLAIMS REGARDING THE SCHNORR PATENT
15	)	

16   In this action, Plaintiff Roger Schlafly proceeds <u>pro se</u>

17   against Public Key Partners ("PKP") and RSA Data Security, Inc.

18   ("RSA") alleging various causes of action. In the present motion,

19   Schlafly requests a partial summary judgment invalidating U.S.

20   Patent No. 4,405,829 (the "RSA patent") and for a declaration of

21   non-infringement concerning U.S. Patent No. 4,995,082 (the "Schnorr

22   patent").

23   RSA, which owns exclusive licensing rights to both of the

24   patents, opposes Schlafly's motion and counter-moves for summary

25   adjudication on Schlafly's claims of invalidity and for dismissal of

26   Schlafly's claims relating to the Schnorr patent for absence of a

27   case or controversy.

28   After carefully considering the papers and arguments of the

ENTERED IN CIVIL DOCKET 9/2/97   19

1   parties, the Court DENIES Schlafly's motion for partial summary

2   judgment. Additionally, the Court GRANTS RSA's motion for summary

3   adjudication regarding the validity of the RSA patent and DISMISSES

4   Schlafly's claim of non-infringement of the Schnorr patent.

5

6   I. BACKGROUND

7   **A. Public Key Cryptography**

8   "Cryptography" is the use of secret codes to transmit messages.

9   Traditional encryption systems require that the communicating

10 parties exchange secret keys for enciphering and deciphering before

11 they send their communications. As technology advanced, the need

12 for private communications on insecure channels (i.e. computer and

13 digital telephone) increased, and the inconvenience of exchanging

14 secret keys became more significant.

15   The patents in this case relate to the field of public key

16 cryptography, which provides a means for privacy on insecure lines

17 that does not involve an exchange of secret keys. In a public key

18 system each user has two keys: a public key and a private key. The

19 public key is revealed to all parties wishing to communicate with

20 the user and the private key is known only to the user. Senders

21 encrypt messages with the public key, but once the message is

22 encrypted it can only be deciphered by using the user's private key.

23 Thus, the public key system, in which a message is encoded with one

24 key and decoded with a second key available only to the intended

25 recipient, insures secrecy without an exchange of secret keys.

26   The public key system also provides a means for verifying the

27 identity of the sender of a message through use of "digital

28   2

1 signatures."   A sender "signs" a message by using the sender's

2 private key.   The receiving party then uses the sender's public key

3 to confirm that the "signature" was created by the sender.

4 **B. The RSA Patent**

5   While working together at MIT, three men, Ronald Rivest, Adi

6 Shamir and Leonard Adleman, created a practical implementation of

7 the public key cryptosystem principles and applied for a patent on

8 their invention.   During the prosecution of the patent, the Patent

9 and Trademark Office ("PTO") objected to the patent on the ground of

10 nonstatutory subject matter.   However, the PTO later reconsidered

11 and withdrew its nonstatutory objection and eventually granted the

12 patent application on September 20, 1983.

13   The patent discloses a way of transforming plaintext message

14 signals into ciphertext signals and then decoding the ciphertext

15 into plaintext.   The patent makes use of the principle that finding

16 prime numbers is computationally easy, but that factoring the

17 product of two such numbers can be computationally infeasible.

18 Using modular arithmetic, the patent exploits the difficulty of

19 factoring prime numbers to generate keys to be used in encoding and

20 decoding devices.   The patent also provides a means for using the

21 keys to create "digital signatures" for purposes of verification.

22 **C. The Schnorr Patent**

23   The Schnorr patent provides methods for identifying the sender

24 of a message and generating signatures based on arithmetic

25 operations that are less complicated than the operations disclosed

26 in the RSA patent.   With less complicated operations, the

27 signatures and identification systems can be created at a faster

28

1 rate and with less sophisticated equipment.

2   Dr. Claus P. Schnorr, the owner of the Schnorr patent, filed

3 his patent application on February 23, 1990 and the patent issued

4 on February 19, 1991. Dr. Schnorr granted exclusive licensing

5 rights for the Schnorr patent to RSA on October 12, 1995.

6 **D. The Litigation Involving RSA, PKP and Schlafly**

7   In 1987, RSA filed a patent infringement action in the United

8 States District Court for the Northern District of Illinois against

9 Digital Signature and its partners, Michael Markowitz and Roger

10 Schlafly. In that case, RSA alleged that Digital Signature was

11 infringing the RSA patent. Ultimately, Digital Signature,

12 Markowitz and Schlafly entered into a consent judgment in which

13 they agreed to refrain from making, using or selling any products

14 implementing the RSA patent.

15   In 1990, RSA and Caro-Kann Corporation ("CKC"), which is a

16 wholly-owned subsidiary of Cylink Corporation, formed Public Key

17 Partners ("PKP") for the purpose of licensing various cryptography

18 patents, including the RSA patent. In January 1994, PKP learned

19 that Information Security Corp. ("ISC") was about to sell products

20 developed by Schlafly to AT&T for resale. PKP believed that these

21 products infringed some of the patents which it licensed and that

22 the sale of the products constituted a breach of the consent

23 judgment. Therefore, PKP wrote to AT&T and demanded that AT&T

24 cease distribution and marketing of the allegedly infringing

25 products.

26   Several months later, Schlafly wrote to PKP and demanded that

27 PKP refrain from telling others that he had breached the consent

28   4

1 judgment or was guilty of patent infringement. PKP wrote back,

2 stating that Schlafly's letter was "defectively vague" and that

3 Schlafly had admitted to infringing numerous patents. Dissatisfied

4 with PKP's response, Schlafly filed this action in July 1994.

5   On September 6, 1995, an arbitration panel dissolved the PKP

6 partnership. Following the dissolution, RSA received the licensing

7 rights to the RSA Patent.

8   Prior to the dissolution, Cylink filed a lawsuit against PKP

9 and RSA seeking to invalidate the RSA patent. However, Cylink has

10 yet to obtain a judgment invalidating the RSA patent.

11   Schlafly now moves for a partial summary judgment declaring

12 the RSA Patent invalid and unenforceable. Schlafly also seeks to

13 invalidate claims 5 and 6 of the Schnorr patent. In its counter-

14 motion, RSA seeks summary adjudication on the issue of validity of

15 the RSA patent and requests that the Court dismiss Schlafly's claims

16 concerning the Schnorr patent for lack of an "actual controversy"

17 under 28 U.S.C. § 2201.

18

19 **II. LEGAL STANDARD**

20   Patents are presumed to be valid and the burden of

21 establishing invalidity of a patent rests on the party asserting

22 invalidity. 35 U.S.C. § 281. The factual findings supporting a

23 conclusion of invalidity must be proven by clear and convincing

24 evidence. <u>N.V. Akzo v. E.I. DuPont de Nemours</u>, 810 F.2d 1148, 1151

25 (Fed. Cir. 1987). Thus, a party seeking to establish invalidity of

26 a patent must overcome the presumption of validity with clear and

27 convincing evidence.

28

1   Further, as with any other type of suit, summary judgment in a

2 patent case is appropriate when there is no issue of material fact

3 and the moving party is entitled to judgment as a matter of law.

4 Howes v. Medical Components, Inc., 814 F.2d 638, 643 (Fed. Cir.

5 1987). "In deciding such motions, all doubt respecting the

6 presence or absence of factual issues must be resolved in favor of

7 the party opposing summary judgment." Id.

8

9   **III. DISCUSSION**

10   In his motion for summary judgment, Schlafly challenges the

11 validity of the RSA patent and the validity of claims 5 and 6 of

12 the Schnorr patent. Schlafly contends that the RSA patent is

13 invalid because: (1) RSA is estopped from asserting that the patent

14 is valid because RSA's partner, Cylink, has challenged the validity

15 of the RSA patent in court proceedings; and (2) the patent contains

16 nonstatutory subject matter under 35 U.S.C. § 101. Schlafly

17 asserts that claims 5 and 6 of the Schnorr patent are invalid for

18 lack of enablement.

19 **A. The Validity of the RSA Patent**

20   1. Estoppel

21   Schlafly contends that RSA should be estopped from asserting

22 that the RSA patent is valid because RSA's former partner, Cylink,

23 is challenging the patent's validity. The Court disagrees.

24 Schlafly does not cite a single legal authority that supports the

25 assertion that equitable estoppel can be used to prevent a patent

26 owner from claiming that his or her patent is valid. Nor does

27 Schlafly explain why it is inequitable for RSA to maintain the

28   6

1 | position that it has held all along, which is that the RSA patent
2 | is valid.   Further, Cylink's allegations are unproven; no judgment
3 | has been rendered.   Thus, if the Court accepted Schlafly's argument,
4 | it would essentially give binding effect to unproven allegations.
5 | Such a result is nonsensical and inequitable.

6 | 2. Statutory Subject Matter

7 | Schlafly also challenges the RSA patent on the basis that it
8 | is not directed to statutory subject matter under 35 U.S.C. § 101.
9 | The determination of whether a claim is directed to statutory
10 | subject matter is a question of law.   Arrhythmia Research
11 | Technology v. Corazonix Corp., 958 F.2d 1053 (Fed. Cir. 1992).
12 | Statutory or patentable subject matter includes "any new and useful
13 | process, machine, manufacture, or composition of matter, or any new
14 | and useful improvement thereof."   35 U.S.C. § 101.   However, laws
15 | of nature, natural phenomena, and abstract ideas are not
16 | patentable.   Diamond v. Diehr, 450 U.S. 175, 185 (1980).   A
17 | mathematical formula in the abstract is not afforded protection of
18 | the patent laws.   Id.

19 | This concept, that laws of nature, natural phenomenon and
20 | abstract ideas are not patentable, is difficult to apply in the
21 | context of computer-related technology.   However, some guidance can
22 | be found in Supreme Court and Federal Circuit cases.

23 | In Gottschalk v. Benson, 409 U.S. 63 (1972), the Supreme Court
24 | determined that a patent which described a method of programming a
25 | general-purpose computer to convert signals from binary-coded
26 | decimal form to pure binary form was not directed at statutory
27 | material.   The conversion in the patent was achieved through use of

28 |

1 an algorithm, which the Court defined as "[a] procedure for solving

2 a given type of mathematical problem." Id. at 67. The Supreme

3 Court concluded that because the claimed process "has no

4 substantial practical application except in connection with a

5 digital computer" the patent "would wholly pre-empt the mathematical

6 formula," and thus, "would be a patent on the algorithm itself."

7 Id. at 71-72. Accordingly, the Court held the patent invalid.

8   In Diamond v. Diehr, 450 U.S. 175, 185 (1980), the Supreme

9 Court limited the Benson decision. In Diehr, the Court held that a

10 process for curing synthetic rubber that employed a computer was

11 patentable. The Court distinguished Benson by demonstrating that

12 the claimed process in Diehr did not just calculate abstract

13 numerical values but also involved the transformation of a physical

14 article, raw, uncured synthetic rubber, into a different state or

15 thing. Id. at 184. The Court concluded that in determining

16 whether a claimed process is eligible for patent protection the

17 claims must be considered as a whole. Id. at 188. "[W]hen a claim

18 containing a mathematical formula implements or applies that

19 formula in a structure or process which, considered as a whole, is

20 performing a function which the patent laws were designed to

21 protect, then the claim satisfies the requirements of § 101." Id.

22 at 192.

23   Recently, the Federal Circuit, en banc, addressed § 101

24 subject matter in In re Alappat, 33 F.3d 1526, 1542-1545 (en

25 banc)(Fed. Cir. 1994). The Alappat court interpreted Diehr as

26 standing for the straightforward concept "that certain types of

27 mathematical subject matter, standing alone, represent nothing more

28

8

1 than abstract ideas until reduced to some practical application."

2 Id. at 1543. The Federal Circuit further stated that relevant

3 inquiry in dealing with mathematical subject matter is to determine

4 whether the claimed subject matter as a whole is no more than a

5 disembodied mathematical concept which may be characterized as an

6 "abstract idea." Id. at 1544. In making such an inquiry, it is

7 unnecessary to determine whether a claim, as part of a whole,

8 contains mathematical subject matter, which standing alone would

9 not be entitled patent protection. Id. "Indeed, because the

10 dispositive inquiry is whether a claim as a whole is directed to

11 statutory subject matter, it is irrelevant that a claim may

12 contain, as part of the whole, subject matter which would not be

13 patentable by itself." Id.

14   In dealing with the specific claim at issue in that case, the

15 Alappat court noted that transforming "one set of data to another

16 through what may be viewed as a series of mathematical calculations

17 does not alone justify a holding that the claim as a whole is

18 directed to nonstatutory subject matter." Id. The court also

19 found that the disputed claim was not so abstract and sweeping so

20 as to wholly pre-empt the use of any apparatus employing the

21 mathematical calculations in the claim. Id. Further, the Alappat

22 court determined that the claim fell within 35 U.S.C. § 112, ¶ 6,

23 which limited the claim to a general purpose computer programmed to

24 carry out the claimed invention. The court then held "that such

25 programming creates a new machine, because a general purpose

26 computer in effect becomes a special purpose computer once it is

27 programmed to perform particular functions pursuant to instructions

28

1 from program software." Id. at 1545. Based upon this reasoning,

2 the Federal Circuit concluded that the disputed claim covered

3 patentable subject matter. Id.

4   Here, applying the reasoning of Diehr and Alappat leads to the

5 conclusion that the RSA patent is directed to patentable subject

6 matter under 35 U.S.C. § 101. Taken as a whole, the RSA patent is

7 entitled to patent protection. The claims of the patent make use

8 of known structures, a communications channel, an encoding device

9 and a decoding device, to produce a practical invention, i.e. a

10 means for securely transmitting messages across an insecure line.

11 The messages are compromised of word signals that are transformed

12 from one state, plaintext, to another state, ciphertext, by the

13 patented invention. The word signals are then transmitted across

14 an insecure line and transformed by the decoding device from

15 ciphertext into plaintext. As such, the claimed invention is not

16 merely a disembodied mathematical concept but rather a specific

17 machine designed to transform and transmit word signals.

18   Further, the patent is not so abstract that it entirely

19 preempts the use of any apparatus using the mathematical

20 calculations recited therein. The claims of the patent are written

21 in means plus function language and therefore fall within 35 U.S.C.

22 § 112, ¶ 6. Accordingly, the patent is limited to the means set

23 forth in the in the specification and their structural equivalents.

24 In other words, the claims are limited to the specific hardware

25 elements, or their structural equivalents, configured as set forth

26 in the specification to create a machine for encoding and decoding

27 messages transmitted over insecure channels. Thus, the invention

28

1 | programs general purpose hardware to create a special purpose

2 | machine.

3 | In sum, the invention described in the RSA patent applies

4 | mathematical principles to an encoding device, a communication

5 | channel, and a decoding devices to create a cryptographic system

6 | that transforms plaintext into ciphertext and then back to

7 | plaintext.   The patent does not merely monopolize the use of a law

8 | of nature or an abstract idea but instead applies mathematical

9 | calculations to existing hardware to produce a useful and tangible

10 | result.   Thus, RSA patent represents statutory subject matter under

11 | 35 U.S.C. § 101.

B. Schlafly's Claim of Non-infringement of the Schnorr Patent

13 | RSA contends that Schlafly lacks standing to bring his claim

14 | of non-infringement of the Schnorr patent because RSA has not

15 | threatened to sue Schlafly for infringement of the Schnorr patent.

16 | For a district court to render a declaratory judgment there must be

17 | an actual controversy between interested parties.   28 U.S.C. §

18 | 2201.   In the patent context an actual controversy exists when

19 | there is both:

> (1) an explicit threat or other action by the patentee, which creates a reasonable apprehension on the part of the declaratory plaintiff that it will face an infringement suit, and (2) present activity which could constitute infringement or concrete steps taken with the intent to conduct such activity.

BP Chemicals Ltd. v. Union Carbide Corp., 4 F.3d 975, 978 (Fed. Cir. 1993).   "The purpose of the two-part test is to determine whether the need for judicial attention is real and immediate, or is prospective and uncertain of occurrence."   Id. (internal

11

1 citations omitted). Further, the declaratory plaintiff has the

2 burden of establishing that he has a reasonable apprehension of an

3 infringement suit. <u>Shell Oil Co. v. Amoco Corp.</u>, 970 F.2d 885, 887

4 (Fed. Cir. 1992). A plaintiff can meet this burden by proving that

5 there has been an express charge of infringement or by showing that

6 the "totality of circumstances" gives rise to a reasonable

7 apprehension of a suit. <u>Id</u>. at 888. "The totality of

8 circumstances test is an objective one and is applied to the facts

9 existing at the time of the complaint." <u>Cylink Corporation v.</u>

10 <u>Schnorr</u>, 939 F. Supp. 39, 41 (D.D.C. 1996).

11   Here, RSA contends that Schlafly cannot establish any facts

12 supporting an objectively reasonable apprehension that PKP or RSA

13 would initiate an infringement action based on the Schnorr patent.

14 In response, Schlafly references three letters as evidence

15 supporting a reasonable apprehension of suit: (1) a letter written

16 by Dr. Schnorr to the Director of Computer Systems Laboratories,

17 National Institute of Standards and Technology; (2) a letter from

18 PKP to AT&T; and (3) a letter written by PKP to Schlafly.

19   Dr. Schnorr's letter, dated October 30, 1991, states "the

20 proposed DSA infringes on my U.S. patent 4,995,082" and "I will

21 inform potential users of DSA that the use of DSA requires a

22 license of my original scheme. I preserve the right to sue any

23 user of DSA without such a license." However, the letter is not

24 directed to Schlafly or any other alleged infringer and does not

25 mention any particular products. Rather, it is a general statement

26 by Dr. Schnorr of his position regarding his patent and the use of

27 DSA. General statements of this type, which are not directed to

28   12

1   any particular party, do not manifest an intent to sue. <u>See</u>

2   <u>Performance Abatement Services, Inc. v. GPAC, Inc.</u>, 733 F. Supp.

3   1015, 1018-19 (W.D.N.C. 1990)(holding that package of literature

4   sent to 3000 parties did not constitute a threat of suit). Thus,

5   Dr. Schnorr's letter does not amount to a threat to Schlafly or give

6   Schlafly a reasonable apprehension of an infringement suit.

7   The two remaining letters upon which Schlafly relies are

8   properly viewed together as part of a series of communications

9   involving PKP, AT&T and Schlafly. On January 12, 1994, PKP wrote

10 to AT&T about a software program that AT&T was about to release.

11 According to the letter, the program was licensed by Information

12 Security Corporation which was the successor in interest to Digital

13 Signature. The letter informs AT&T of the consent judgment entered

14 into by Digital Signature and requests that AT&T cease distribution

15 of any products "tainted" by the consent judgment. The letter also

16 notes AT&T's interest in practicing the DSA and invites AT&T to

17 negotiate a modification of its existing license to include the

18 practice of the DSA.

19   On April 4, 1994, Schlafly wrote a letter to PKP which states,

20 "I have heard that you have been telling people that I have

21 breached a consent judgment or that I have infringed patents." The

22 letter then demands that PKP respond to this allegation.

23   PKP responded to Schlafly in a letter dated April 18, 1994.

24 PKP's letter states that Schlafly had admitted in the previous

25 litigation that he was marketing a commercial application of DSA

26 technology. The letter then states that "[t]he practice of the DSA

27

28   13

1   is described in the Hellman-Diffie, Hellman-Merkle[1] and Schnorr

2   patents, and your use of the DSA for commercial application

3   constitutes an unlicensed use of such patents."   PKP's letter also

4   states that Schlafly's April 4 letter "is defectively vague" and

5   does not provide adequate information for PKP to respond.   The

6   letter then concludes "[i]n any event, based on your own admission,

7   it appears you have infringed on numerous patents."

8   Neither of the letters written by PKP make any explicit

9   threats of an infringement suit to either AT&T or Schlafly.   The

10   letters also fail to support a reasonable apprehension of an

11   infringement suit on the Schnorr patent.   In the letter to AT&T,

12   PKP noted AT&T's interest in practicing the DSA and offered to

13   negotiate AT&T licensing rights.   As stated in Cylink v. Schnorr,

14   939 F. Supp. at 41, a statement of position and an offer to

15   negotiate do not constitute an express charge of patent

16   infringement.   Further, in its letter to Schlafly, PKP merely set

17   forth its position in response to Schlafly's April 4 letter.   Under

18   the circumstances, it was appropriate for PKP to assert its

19   arguments regarding the DSA and the Schnorr patent when approached

20   by a potential infringer.   Shell Oil, 970 F.2d at 889.   As

21   exclusive licensors of the patent, PKP and RSA have the right not

22   to sue or "not to be provoked into suit by another party's initiated
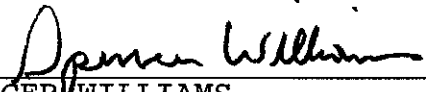
23   discussions."   Id.

24   In sum, considering the "totality of the circumstances," the

25   _____

26   [1]   The Hellman-Diffie and Hellman-Merkle patents are additional
     cryptography patents that were licensed by PKP at the time of the
27   letter.

28   14

1 Court finds that there is no "actual controversy" regarding the

2 Schnorr patent as required by 28 U.S.C. § 2201.   Therefore, the

3 Court DISMISSES Schlafly's claim of non-infringement of the Schnorr

4 patent.

5

6   IT IS SO ORDERED.

7 DATED: 8/22/97   _____

8   SPENCER WILLIAMS
                                    United States District Judge

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28   15